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THESIS

Friendship Quality as a Protective Factor Against Maladjustment Outcomes for
Victimized Adolescents

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Friendship quality as a protective factor against maladjustment outcomes for victimized adolescents.

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Abstract:

Slachtofferschap kan het leven van een adolescent ernstig beïnvloeden met gevolgen die stand houden tot in de jong volwassenheid. In deze studie is de beschermende functie van vriendschapskwaliteit onderzocht bij 293 Finse adolescenten (124 boys en 169 meisjes, M_{age} 13.42). Drie vriendschap indices (positieve vriendschapskwaliteit, conflict en co-ruminatie) en drie uitkomst variabelen (boosheid, verdriet en angst) zijn gemeten. Er werd verwacht dat adolescenten hoog in positieve vriendschapskwaliteit of laag in conflict minder negatief aangepast zouden zijn. Deze hypothesen konden deels worden bevestigd. Onze resultaten toonden dat de link tussen boosheid en slachtofferschap zwakker was voor lage niveaus van vriendschapskwaliteit en co-ruminatie. Daar in tegen werd, zoals verwacht, de relatie tussen slachtofferschap en verdriet zwakker met hoge niveaus van vriendschapskwaliteit. Onverwacht werd de relatie tussen slachtofferschap en verdriet sterker bij lage niveaus van conflict en co-ruminatie. Onze resultaten suggereren dat hoge niveaus van positieve vriendschapskwaliteit of lage niveaus van conflict niet altijd een beschermende functie hebben. Implicaties voor interventies worden besproken.

Trefwoorden: (positieve) vriendschapskwaliteit, Conflict, Co-ruminatie, Boosheid, Verdriet, Angst

Abstract

Victimization can have serious negative impact on adolescents' well-being with consequences that last into young adulthood. In this study, we examined the protective function of friendship quality for victimized adolescents. Participants were 293 Finnish adolescents (124 boys and 169 girls; M_{age} 13.42). We measured three friendship quality indices (positive friendship quality, conflict and co-rumination) and three maladjustment outcome variables (anger, sadness and anxiety). We expected that adolescents high in positive friendship quality or low in conflict to be less maladjusted. At co-rumination we looked more exploratory. We were able to partially confirm our hypotheses. Our results showed that whereas the link between victimization and anger became weaker as the levels of positive friendship quality and

co-rumination decreased, victimization-sadness associations became weaker as the levels of positive friendship quality increased. Unexpectedly, victimization-sadness associations also became weaker as the levels of conflict and co-rumination increased. Our results suggest that high levels of positive friendship quality and low levels of conflict might not always provide a protective function. Implications for interventions are discussed.

Keywords: (positive) Friendship quality, Conflict, Co-rumination, Anger, Sadness, Anxiety

Introduction

The importance of the social environment in which children grow up has been apparent for decades. Peers can be a source of joy as well as distress in adolescence. Victimization by peers represents the latter and is broadly defined as being the target of hurtful behaviors perpetrated by peers (Rueger, Malecki, & Demaray, 2011). It poses a serious problem for children's and adolescents' adjustment. For instance, in the Netherlands more than six percent of middle school students between 11 and 16 years old admitted being victimized at least twice a month in the last couple of months (Van Dorsselaer et al., 2009). This number is even higher for children in primary school (Van Dorsselaer et al., 2009). Victimization can refer to being the target of peer harassment, aggression, or bullying (Rueger et al., 2011). Although victimization and bullying are related terms, victimization does not require aggressive acts to be repetitive in nature or involve a power difference between the aggressor and victim (Peets & Salmivalli, 2009; Rueger et al., 2011). Much is known about the negative effects that victimization has on adolescents' psychological and social well-being (Hodges, Malone, & Perry, 1997; Juvonen, Nishina, & Graham, 2000; Kaltiala-Heino, Fröjd, & Marttunen, 2009; Overbeek, Zeevalvink, Zutphen, Vermulst, & Scholte, 2009; Rueger et al., 2011; Turner, Finkelhor, & Ormrod, 2010; Vanhalst, Luyckx, & Goossens, 2014; Woodhouse, Dykas, & Cassidy, 2011). Less is known about the factors that can protect against these negative outcomes. In this thesis, we examined different dimensions of friendship quality (i.e., positive friendship quality, conflict, and co-rumination) as protective factors against the negative effects of victimization (anger, sadness, and anxiety). Understanding their protective role may also help creating effective intervention programs.

The Effect of Victimization on Adjustment

Victimization clearly undermines individuals' well-being. Previous research has shown that victimization is associated with internalizing symptoms (Juvonen et al., 2000; Kaltiala-Heino et al., 2009; Rueger et al., 2011; Turner et al., 2010) like anxiety (Rueger et al., 2011), loneliness (Juvonen et al., 2000; Vanhalst et al., 2014; Woodhouse et al., 2011), and lower self-esteem (Juvonen et al., 2000; Overbeek et al., 2009; Rueger et al., 2011), and externalizing symptoms (Hodges et al., 1997). Importantly, negative effects of victimization can persist into young adulthood (Newman, Holden, & Delville, 2005).

There are several theories that might explain why victimization has such a drastic effect. For instance, according to Baumeister and Leary (1995), belongingness is one of the most essential needs. They state that people have a need to form and maintain at least a minimum amount of lasting, positive, and significant relationships. To do so they need frequent pleasant interactions with others and these interactions must be characterized by a pattern of frequent affective concern for each other's wellbeing (Baumeister & Leary, 1995). When adolescents are the target of their peers' negative actions, their need for belongingness is likely to be unmet. A lack of belongingness is assumed to be the cause of several negative adjustment outcomes (Baumeister & Leary, 1995). In addition, according to the Self-Determination Theory (SDT; Deci & Ryan, 2008), both relatedness (which is similar to belongingness) and feelings of autonomy are essential for optimal functioning. Victimized adolescents might feel they have no control over their life. Their behavior is driven by factors such as the need for approval and avoidance of shame and taking back control over their life (Deci & Ryan, 2008). When people feel that they are not autonomous, they experience pressure to think, feel, and act in particular ways. This in turn has a negative effect on health, well-being, and performance (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). So both Belongingness Theory and Self-Determination Theory offer an explanation for the negative effect of victimization on adjustment.

The Role of Friendships

Both of the above mentioned theories acknowledge the importance of peers in children's and adolescents' development. Peer relationships, like acceptance at the group level and friendships at the dyadic level, contribute in distinct ways to a child's developmental outcome (Hartup, 1996). A child's acceptance represents whether someone is liked by others, whereas friendships are dyadic relationships that are

intimate and based on trust (Gifford-Smith & Brownwell, 2003). There is extensive literature on the role of peer relations and friendships in the development of adjustment problems (Deater-Deckard, 2001; Gifford-Smith & Brownwell, 2003) and their protective functions (Newcomb & Bagwell, 1995; Parker & Asher, 1987).

So having a friend matters. However it's not only the number of friends that matter but also the quality of the friendship (Woods, Done & Kalsi, 2009). Parker and Asher (1993) characterize friendship quality by both positive and negative dimensions. Positive friendship quality includes the aspects: validation and caring, companionship and recreation, help and guidance, intimate exchange and conflict resolution. Friendships provide reliable alliances, promotes self-esteem, it produces feelings of wellbeing (Asher & Parker, 1989; Newcomb & Bagwell, 1995; Sullivan, 1953 in Hartup, 1996) and it's related to lower levels of loneliness (Parker & Asher, 1993).

However, even best friends sometimes argue or fight. This is represented in the negative dimension with the aspect 'conflict and betrayal'. Conflict is an inevitable aspect of any close relationship (Newcomb & Bagwell, 1995). Most children admit that even best friends sometimes have conflicts due to the fact that their friend wanted to be better than them, rival with them, or dominate them (Berndt, 2002). Schmidt and Bagwell (2007) showed that children who were victimized are high in conflict. However there are adolescents that have friendships that are low in conflict (Berndt & Perry, 1986). Among older children these levels of conflict are independent of the levels of positive and supportive aspects of friendship (Berndt & Perry, 1986). According to Berndt (1996) scores on the negative 'conflict and betrayal' dimension are only weakly related to those on the positive dimension in general (in Berndt, 2002; Schmidt & Bagwell, 2007). It's therefore possible that the conflict dimension of friendship quality may not have the same effect on the consequences of victimization as the positive friendship quality dimensions. Thus, knowing that someone has a friendship that has many positive qualities does not necessarily inform us about the degree of conflict in that relationship. So both dimensions must be considered when researching friendship quality. Clearly, more research is needed to give accurate insight into the protective or harmful role of these two friendship dimensions.

Parker & Asher (1993) acknowledged the importance of disclosure in the aspect intimacy exchange, which is related to feelings of being close emotionally

(Camarena, Sarigiani, & Peterson, 1990). Sharing even the most personal thoughts and feelings characterizes highly intimate friendships (Berndt, 2002). Disclosure plays a more important role in adolescents' than children's friendships (Berndt & Perry, 1986). Although high levels of disclosure are usually beneficial for adjustment (Rose, 2002) this is not always the case. Continuously focusing on the negative in life, rumination is related with emotional problems such as depression and anxiety (Rose, 2002). A relatively new related construct, introduced by Rose (2002), that represents the overlap between disclosure and rumination, is co-rumination. It refers to extensively and repeatedly discussing and revisiting problems, speculating about problems and focusing on negative feelings within a dyadic relationship (Rose, 2002). Co-rumination represents an overlap between disclosure and rumination, but it is clearly different from both constructs. Unlike rumination, co-rumination is social. Unlike disclosure, co-rumination only focuses on the negative (Rose, 2002). Interestingly, Rose (2002) found that co-rumination is related to positive friendship quality as well as problematic emotional adjustment. Thus co-rumination appears to be associated with both benefits and costs and therefore can have both effects on adjustment.

Positive friendship quality, conflict, and co-rumination as moderators

Victimized adolescents frequently tend to have fewer friends and they have difficulties making new friends (Griffin & Gross, 2004; Haynie et al., 2001; Young & Sweeting, 2004). However victimized adolescents can have friends and the quality of these friendships matter (Woods et al., 2009). Victimized children and adolescents can have friendships of lower-quality (Bollmer, Milich, Harris, & Maras, 2005; Boulton, Trueman, Chau, Whitehand, & Amatya, 1999; Rubin et al., 2004). However there is evidence showing victimization is less likely to be associated with maladjustment (e.g. internalizing problems, externalizing problems, and physical weakness) when victimized adolescents have friends who are capable of fulfilling a protective function by sticking up for them (Hodges, Boivin, Vitaro, & Bukowski, 1999; Hodges et al., 1997; Malcolm, Jensen-Campbell, Rex-Lear, & Walldrip 2006).

Only few studies have examined whether friendship quality moderates associations between victimization and maladjustment. Woods and colleagues (2009) found that low quality of friendship was associated with higher levels of loneliness for victims whereas high quality friendships were associated with lower levels of loneliness. According to Hodges and his colleagues (1999) victimization predicted

internalizing and externalizing symptoms, but only for those victimized adolescent who had low quality friendships. This relationship did not exist for victimized adolescents who had higher quality friendships (Hodges et al., 1999). In this way friendships may help to buffer against stressful life events, such as victimization, and thus protect against their negative outcome (Rigby, 2000). This is called the friendship protection hypotheses (Boulton et al., 1999). Parker and Asher (1993) suggest that children with not enough friendships or to low quality friendships may experience feelings of loneliness. In this way it is possible that adolescents with low quality friendships who are victimized may lack emotional or direct support because they don't have friends who stick up for them or who can comfort them. This is illustrated by Schmidt and Bagwell (2007) who found that victimized girls experience less social concerns when they felt their friend offered more help. Friends could also possibly help a victimized adolescent by teaching them coping mechanisms or by validating their fears. Qualities that are not provided by low quality friendships, which causes that adolescents in these friendships are more likely to be maladjusted because of victimization.

In addition, it is important to examine the moderating role of conflict as well because positive friendship quality features are only weakly related to negative features (Berndt, 1996, in Berndt, 2002; Schmidt & Bagwell, 2007). Victimized adolescent who have friendships that are high in conflict may be more maladjusted than victimized adolescents who have friendships that are low in conflict. Friends who frequently get into conflicts with each other are practicing negative social behaviors that may generalize to interactions with other peers and adults (Berndt, 2002). Conflict is associated with the termination of friendship and it is predictive of greater psychological and behavioral malfunction (Berndt, 2002). Low levels of conflict in a friendship might be protective because victimized adolescents might feel more secure in their friendships. If there are few conflicts in their friendships they may worry less about losing their friend and therefore might go to them more for support when victimized. However, this is only one possible explanation. Here we are presented with potential moderating role of conflict. Schmidt and Bagwell (2007) did not find a moderation effect for conflict on the relationship between victimization and internalizing distress but it is possible a moderation effect exists when looking at more specific outcome variables.

Co-rumination is another factor that might influence the relationships between victimization and maladjustment outcomes. With co-rumination there seems to be a paradox. Support is generally thought to be positive and adaptive (Rose, Carlson, & Waller, 2007). When adolescents co-ruminate they may feel less socially anxious (Starr & Davila, 2009) experience more closeness (Rose, 2002) and co-rumination may actually lead to higher quality friendships (Rose et al., 2007), which according to the friendship protection hypothesis should protect victimized adolescents against maladjustment. However Rose (2002) found that co-rumination is also related internalizing symptoms, like anxiety (Rose et al., 2007), a more negative outcome. Co-rumination could increase the probability that victimized adolescents constantly think about their negative experiences and engage in self-blame. On the other hand, when adolescents co-ruminate they share highly personal thoughts and feelings, which could be used against them (Rose et al., 2007). So it is also possible that they blame others for their negative experiences and feelings. A new construct such as co-rumination still needs more research to determine its protective or harmful value since to our knowledge this has not been done before. Researching it in combination with victimization might be even more interesting because victimized adolescents might be more prone to focus on the negative.

Until now, only few studies have examined whether positive friendship quality (Hodges et al., 1999) or conflict (Schmidt & Bagwell, 2007) moderates associations between victimization and maladjustment. We were not able to find a single study that examined the moderating role of co-rumination. Thus, this study was conducted to get additional insight into the protective role that different friendship quality dimensions play in the lives of victimized adolescents.

Current study

In this thesis, we tested the ‘friendship protection hypothesis’ (Boulton et al., 1999). We examined whether friendship quality (high positive friendship quality and low conflict) served as a protective factor against maladjustment outcomes (anger, sadness and anxiety) for victimized adolescents. We expected that victimization would be less strongly associated with maladjustment for adolescents who had friendships characterized by high levels of positive friendship quality or low levels of conflict. Because co-rumination is associated with both benefits and costs (Rose, 2002; Rose et al., 2007), it could enhance or decrease the links between victimization

and maladjustment. Therefore our hypothesis involving co-rumination as a moderator was more exploratory in nature.

Method

Participants

Initially 448 7th- and 8th-grade students from two public schools in the area of Turku (a town in the south-western part of Finland with approximately 180,000 inhabitants) were approached to participate in this research. However, 83% of the parents gave permission, resulting in a sample of 373 participants. Because some of the students did want to participate or did not participate in both testing sessions, the sample size was further reduced to 365 participants. In our final sample, we only included 293 students who had a mutual friendship with their identified friend (124 boys and 169 girls; 151 7th and 142 8th graders). The age range was between 12 and 15 years with a mean of 13.42 ($SD = .64$) years.

Measures

Friendship nominations. Participants completed a friendship nomination measure (in session 1). Participants were asked to nominate up to three best same-sex friends. If participants nominated more than one friend, they were asked to choose one very very best friend. On the basis of certain criteria (see also Rose et al., 2002), one specific friend was identified for each participant (priority was given to a reciprocal friend). The name of that friend was used in the friendship quality questionnaire (in session 2).

Victimization. Victimization was measured with three items (see Card & Hodges, 2007; Toblin, Schwartz, Gorman & Abou-ezzeddine, 2005). Participants were asked to nominate up to three same-sex peers who fit the description in an item. A sample item is 'He/she gets picked on by other kids'. For each item, the number of received nominations was divided by the possible number of nominations one could receive. This was done in order to take into account differences in the size of the classrooms. The reliability of this scale was good ($\alpha = .89$). An average was created across the items.

Positive friendship quality and Conflict. There were 18 items measuring six friendship quality dimensions (Parker & Asher, 1993). All items were measured with regard to the previously identified friend. Each friendship dimension (companionship and recreation, validation and caring, help and guidance, intimate disclosure, conflict

resolution, conflict and betrayal) was measured with 3 items that had the highest loading on their primary factor in the study by Parker and Asher (1993). The first five dimensions were averaged to create a 'Positive friendship quality' construct. A sample item is '... (the name of the identified friend) and I always sit together at lunch'. The reliability of this scale was good ($\alpha = .94$). Three items measuring conflict and betrayal were averaged to represent a separate 'Conflict' construct. A sample item is '... (name of the identified friend) and I get mad at each other a lot'. The reliability of this scale was also good ($\alpha = .87$). Ratings were provided on a five-point Likert scale ranging from 0 = not at all true, to 4 = really true.

Co-rumination. Nine items were used to measure the construct of 'Co-rumination' (Rose, 2002). Items assess excessive discussion about something bad that happened to one of the friends within that dyadic relationship. A sample item is 'When something bad happens to me, ... (name of the identified friend) always tries to get me to tell every detail about what happened'. Ratings were provided on a five point Likert scale ranging from 0 = not at all true, to 4 = really true. The reliability of this scale was good ($\alpha = .96$). An average was created across the nine items.

Anger, Sadness and Anxiety. These three constructs were measured via peer nominations. Again, adolescents were presented with a list of names of their same-sex classmates and were asked to nominate up to three peers who fit the description in an item. Each of the three constructs was assessed with one item. The construct of anger was measured with the item: '(S)he gets angry a lot (Schultz, Izard, & Bear, 2004).' The construct of sadness was measured with the item: '(S)he gets sad a lot (Schultz et al., 2004). The construct of anxiety was measured with the item: '(S)he is frightened and nervous about new things or new situations' (Pulkkinen, Kaprio, & Rose, 1999). Again, for each of those items, the number of received nominations was divided by the possible number of nominations one could have gotten.

Procedure

Data were collected in the fall of 2009 (this was the first wave of the three-wave longitudinal data). All questionnaires were filled out online in computer labs at school. Each participant was given an individual password. Testing was conducted in small groups of 15 to 20 students during regular school hours. There were two testing sessions. Friendship nominations were filled out during the first session and the rest of the measures used in this thesis were filled out during the second session. One or

two psychology master's students supervised these sessions. Participants received a movie ticket as a compensation for their effort.

Plan of Analyses

In our analyses we only included participant who had a reciprocal friendship. First, bivariate correlations were computed among the study variables. Then, a series of hierarchical regression analyses were conducted with SPSS 20.0 (IBM Corp, 2011) with standardized variables. Altogether, we ran nine analyses. In each analysis, anger, sadness or anxiety served as the dependent variable. On the first step, we controlled for age and sex differences and looked at the main effect of victimization. On the second step, the main effect of the moderator (positive friendship quality, conflict, or co-rumination) was tested. On the third step, one of the interaction terms (victimization x positive friendship quality, victimization x conflict, victimization x co-rumination) was added (Aiken & West, 1991). Thus, for each outcome, we conducted three separate regression analyses involving one of the three moderators. When the interaction term was significant, we conducted follow-up simple slope analyses by using PROCESS (Hayes, 2012). We looked at the effect of victimization on the adjustment outcomes at three levels of each moderator, low (one SD below mean), average (at the mean), high (one SD above mean). Initially, when checking the assumptions of regression analyses, we detected some outliers. However, when these were deleted, our findings were essentially the same. Therefore, we decided to keep all the cases in our analyses.

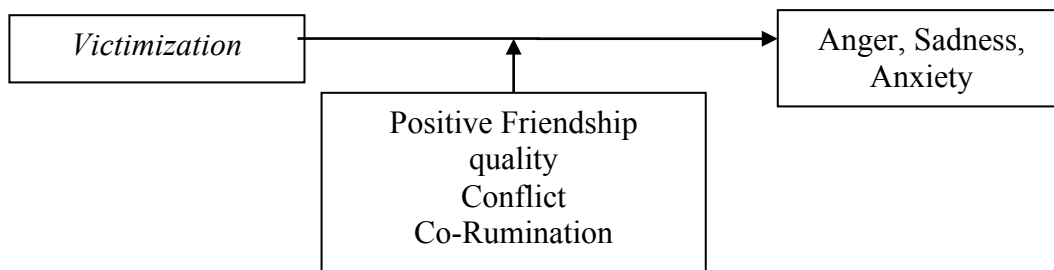


Figure 1. Model of the preformed moderation analyses.

Results

Initial Analyses. Mean scores and standard deviations are shown in Table 1. We also computed correlations among the study variables (see Table 2). A few associations deserve some attention. Victimization correlates quite highly with

sadness. Victimization also had a positive correlation, although weaker one, with anger and anxiety. It is worth mentioning that that none of the three moderators correlated with victimization. In addition, positive friendship quality had a high correlation with co-rumination. Conceptually an overlap is expected, but theoretically there is a difference. We will further discuss this in the discussion.

Table 2
Bivariate Correlation among the Study Variables

	1	2	3	4	5	6	7
1. Victimization	-	-.034	-.048	-.042	.138*	.517**	.367**
2. Positive friendship quality		-	-.105	.715**	-.029	-.108	-.074
3. Conflict			-	-.119*	.045	-.107	-.099
4. Co-Rumination				-	.091	-.046	-.048
5. Anger					-	.176**	.148*
6. Sadness						-	.268**
7. Anxiety							-
<i>M (SD)</i>	.05(.11)	2.25(.98)	.52(.75)	1.47(1.09)	.07(.14)	.31(.09)	.04(.09)
Min-max	.00-.70	.00-4.00	.00-4.00	.00-4.00	.00-.75	.00-.89	.00-.50

Note: $N = 293$, * $p < .05$, ** $p < .01$.

Main Analyses

Predicting Anger. The results for the three regression analyses with anger as dependent variable are shown in Table 3. The first step explained altogether 3.4% of the variance in anger. On the second step, no main effects were found. This step explained an additional .4 to .6% of the variance in the outcome. However, on the third step, the effect of victimization on anger was moderated by positive friendship quality, $\Delta F(1, 287) = 13.934$, $p < .001$, and co-rumination, $\Delta F(1, 286) = 11.901$, $p = .001$.

Table 3

Results from three regression analyses: Predicting Anger

	Positive friendship quality as a moderator			Conflict as a moderator			Co-rumination as a moderator		
	β	t	ΔR^2	β	t	ΔR^2	β	t	ΔR^2
Step 1			.034*			.034*			.034*
Age	.101 [†]	1.732		.101 [†]	1.732		.100 [†]	1.717	
Sex	.070	1.206		.070	1.206		.068	1.178	
Victimization	.131*	2.245		.131*	2.245		.130*	2.232	
Step 2			.006			.004			.004
Moderator	-.086	1.294		.060	1.038		.076	-1.096	
Step 3			.044***			.003			.038**
Victimization									
X Moderator	.213***	3.733		.052	.895		.203***	3.450	

Note: [†] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$. One participant did not fill out the questions about co-rumination

Simple slope analyses (as shown in Figure 2) showed that at low levels of positive friendship quality victimization was unrelated to anger ($\beta = -.105, p = .217$). In contrast victimization did have a positive effect on anger at medium and high levels of positive friendship quality. The effect of victimization on anger was stronger at high ($\beta = .397, p < .001$) than at medium levels ($\beta = .146, p = .011$) of positive friendship quality. This means that the slope increases with the increasing levels of positive friendship quality.

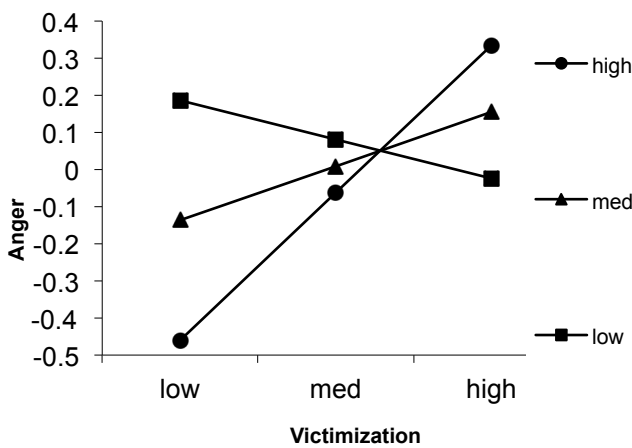


Figure 2. The effect of victimization on anger at low, medium, and high levels of positive friendship quality

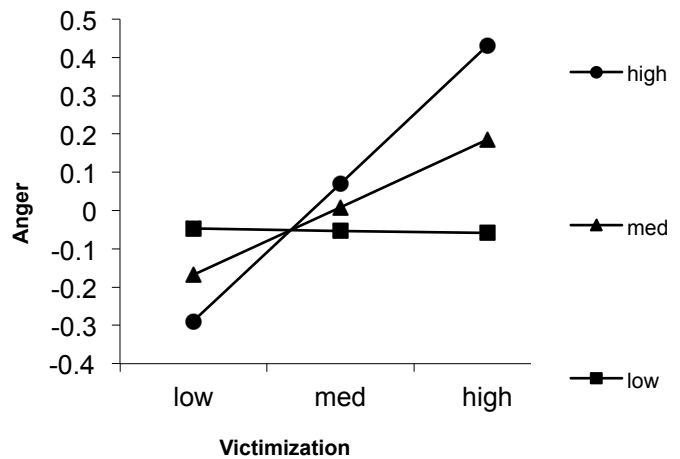


Figure 3. The effect of victimization on anger at low, medium, and high levels of co-rumination

Similar results were found for co-rumination as a moderator. The simple slope analysis is shown in Figure 3. The effect of victimization on anger was non-significant at low levels of co-rumination ($\beta = -.006, p < .930$). In contrast, at the medium and high levels of co-rumination, victimization had a positive association with anger. This effect was stronger at high levels of co-rumination ($\beta = .360, p < .001$) than at medium levels of co-rumination ($\beta = .177, p = .003$). This means that the slope between victimization and anger increased with the increasing level of co-rumination.

Predicting Sadness. The results for the three regression analyses with sadness as the dependent variable are shown in Table 4. We found a significant positive main effect for victimization. The first step explained altogether 27.2% of the variance in sadness. On the second step, no main effects were found. Moderators explained .0 to .7% of the variance in the outcome. However, the effect of victimization was moderated by positive friendship quality, $\Delta F(1, 287) = 12.804, p < .001$, and conflict, $\Delta F(1, 287) = 20.487, p < .001$. In addition, we also found a marginally significant interaction effect involving co-rumination as a moderating variable, $\Delta F(1, 286) = 3.568, p = .060$.

Table 4
Results from three regression analyses: Predicting Sadness

	Positive friendship quality as a moderator			Conflict as a moderator			Co-rumination as a moderator		
	β	t	ΔR^2	β	t	ΔR^2	β	t	ΔR^2
Step 1			.272***			.272***			.272***
Age	.057	1.137		.057	1.137		.057	1.130	
Sex	-.046	-.907		-.046	-.907		-.046	-.913	
Victimization	.508***	10.043		.508***	10.043		.508***	10.018	
Step 2			.007			.007 [†]			.000
Moderator	-.095	-1.637		-.086 [†]	-1.702		-.004	-.065	
Step 3			.031***			.048***			.009 [†]
Victimization									
X Moderator	-.177***	3.579		-.222***	4.526		-.098 [†]	1.889	

Note: [†] $p < .10$, *** $p < .001$. One participant did not fill out the questions about co-rumination.

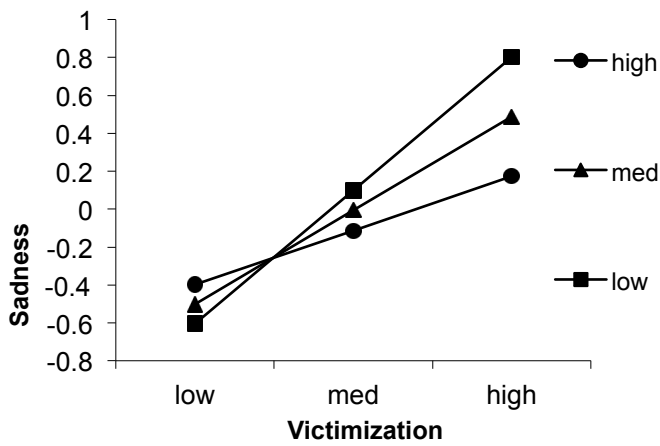


Figure 4. The effect of victimization on sadness at low, medium, and high levels of positive friendship quality

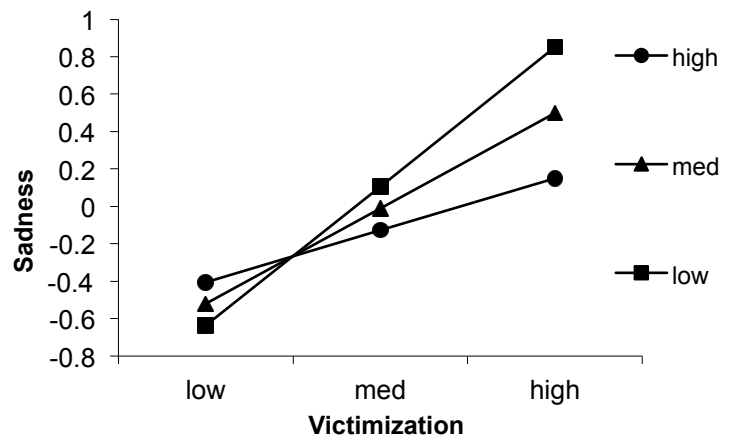


Figure 5. The effect of victimization on sadness at low, medium, and high levels of conflict

We first conducted simple slope analyses with positive friendship quality as a moderating variable. These are shown in Figure 4. Victimization had a positive effect on sadness at all three levels of positive friendship quality, however this effect decreased as the level of friendship quality increased. This effect was stronger at low levels ($\beta = .703, p < .001$) of positive friendship quality compared to medium ($\beta = .494, p < .001$) and high ($\beta = .285, p < .001$) levels of positive friendship quality. This means that the slope between victimization and sadness decreased as the level of positive friendship quality increased.

Since a moderation effect was found for conflict in our hierarchical analysis, simple slopes were conducted here as well (Figure 5). Victimization had a positive effect on sadness at all levels of conflict. However this effect was stronger at low levels ($\beta = .672, p < .001$) than at medium ($\beta = .511, p < .001$) and high ($\beta = .279, p < .001$) levels. This means that the slope between victimization and sadness decreased as the level of conflict increased.

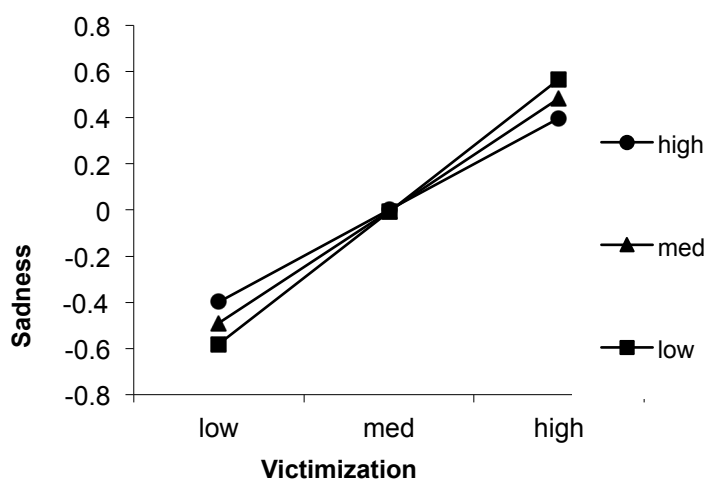


Figure 6. The effect of victimization on sadness at low, medium, and high levels of co-rumination

Since we found a marginal significant effect for co-rumination as a moderating variable we conducted simple slope analyses for this

moderator as well (see Figure 6). We found that victimization had a positive effect on sadness at all levels of the co-rumination. This effect was stronger at low ($\beta = .574, p < .001$) levels of co-rumination compared to medium ($\beta = .486, p < .001$) and high levels ($\beta = .397, p < .001$). This means that the slope between victimization and sadness decreased as the level of co-rumination increased.

Predicting Anxiety. Results for the three regression analyses with anxiety as the dependent variable are shown in Table 5. On the first step we found that girls scored higher on anxiety and victimized adolescents were more anxious. This first step altogether explained 15% of the variance in anxiety. On the second step positive friendship quality, $\Delta F(1, 288) = 6.458, p = .012$, and co-rumination both negatively predicted anxiety, $\Delta F(1, 287) = 4.400, p = .037$. This step explained an additional .5 to 1.9% of variance in the outcome. None of the interactions were significant.

Table 5
Results from three regression analyses: Predicting Anxiety

	Positive friendship quality as a moderator			Conflict as a moderator			Co-rumination as a moderator		
	β	t	ΔR^2	β	t	ΔR^2	β	t	ΔR^2
Step 1			.150***			.150***			.149***
Age	.057	1.038		.057	1.038		.056	1.032	
Sex	.107 [†]	1.964		.107 [†]	1.964		.106 [†]	1.948	
Victimization	.367***	6.719		.367***	6.719		.367***	6.702	
Step 2			.019*			.005			.013*
Moderator	-.158*	-2.541		-.072	-1.323		-.136*	-2.098	
Step 3			.001			.001			.001
Victimization				.035	.645				
X Moderator	-.033	-.615					-.025	-.437	

Note: [†] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$. One participant did not fill out the questions about co-rumination.

Discussion

The goal of this research was to study how maladjustment correlates of victimization would depend on friendship quality. Based on theory and earlier findings, we expected that victimization would be less strongly associated with maladjustment under high levels of positive friendship quality (Boulton et al., 1999; Hodges et al., 1997; Hodges et al., 1999; Malcolm et al., 2006; Rigby, 2000; Schmidt

and Bagwell, 2007) or low levels of conflict (Berndt, 2002; Schmidt & Bagwell, 2007; You & Bellmore, 2012). Because co-rumination has been associated with costs as well as benefits (Rose, 2002; Rose, 2007), our hypotheses concerning the moderating role of co-rumination were more exploratory in nature. We found that the protective function of friendship quality depends on the outcome variable that is being looked at. This research contributes to our understanding of the protective function that friendship quality can provide for victimized adolescents. This may enable others to assess the current interventions and construct effective new ones.

First, we found a main effect of victimization on anger, sadness and anxiety. This means that victimized adolescents are seen as more angry, sad, and anxious by their peers. It is as expected based on the Belongingness Theory and in line with prior findings (Hodges et al, 1997; Juvonen et al., 2000; Kaltiala-Heino et al., 2009; Rueger et al., 2011; Turner et al., 2010). Most of the main effects were further dependent on friendship quality.

However, the focus of this study was directed at the protective function that different dimensions of friendship might provide. When predicting anger, we found that positive friendship quality and co-rumination moderated the effect of victimization on anger. Hodges and his colleagues (1997) found that victimized adolescents were more maladjusted when they had friends who could not protect them. So we expected that victimization would relate less strongly to maladjustment for adolescents with high quality friendships. However, simple slope analyses showed us that the pattern of results was not as expected. Victimization was more strongly related to anger when friendships were of high than low quality. Under low levels of positive friendship quality victimization was not even related to anger. In fact, the level of anger was the highest for adolescents who were highly victimized and who had a friendship of high quality. Similar results were found for co-rumination. This means that high positive friendship did not serve a protective function. In fact, high levels of positive friendship quality and high levels of co-rumination actually worsened the outcome for victimized adolescents.

One possibility is that in high-quality (and co-ruminating) friendships, victimized adolescents are constantly reminded by their friends how unfair the world is toward them, which can increase the probability of anger. Hodges and his colleagues (1999) found that when children spent an above average amount of time with their friends they scores higher on internalizing problems. They speculate that

this may be a sign of an overtly close relationship with unhealthy coping mechanisms. It is possible this would also lead to more anger for victimized adolescents. Another potential explanation is that in such friendships, friends encourage victimized adolescents to fight back which enhances persons' belief to stand up for themselves. Prior research has shown that anger results when individuals feel they need to correct wrongdoings (Tagar, Federico, & Halperin, 2010). In another study, Hodges and his colleagues (1999) suggest that victimization might also cause friends to respond to fight back in support of their victimized friend. In this way anger might be a coping mechanism for victimized adolescents, which is enhanced by high quality friendships. Of course, because we tested the interactions involving co-rumination and positive friendship quality in separate models and these two moderators were highly correlated with each other, we cannot really say whether our results reflect the process of co-rumination or some other positive friendship quality dimension (e.g., support, validation). Thus, future research is needed to resolve this problem

In addition, we found that positive friendship quality, conflict, and co-rumination moderated the relationship between victimization and sadness. Simple slope analyses presented us with a complex image. In line with prior research (Boulton et al., 1999; Hodges et al., 1997; Hodges et al., 1999; Rigby, 2000) the positive relationship between victimization and sadness was the strongest at low levels of positive friendship quality, and the strength of this relationship decreased as the level of positive friendship quality increased. However, unexpectedly, and in contrast to prior research (Schmidt & Bagwell, 2007) we found similar results when using conflict and co-rumination as moderators. This means that the link between victimization and sadness was the strongest at low levels of conflict and co-rumination.

Thus, the strongest associations between victimization and sadness occurred under low levels of positive friendship quality, conflict, or co-rumination. These results could mean that these relationships involve fewer interactions between the friends or less intense friendships. This explanation fits the belongingness hypothesis by Baumeister and Leary (1995), which states that people have a need to form and maintain at least a minimum amount of lasting and positive relationships for which they need frequent pleasant interactions with others. It has the criteria that these interactions must be characterized by a pattern of frequent affective concern for each other's wellbeing (Baumeister & Leary, 1995). Friendships that are low in intensity

might not fulfill this requirement and thus might not meet the needs for belongingness.

The last maladjustment variable we looked at was anxiety. We found significant main effects for positive friendship quality and co-rumination. This means that adolescents high in positive friendship quality scored lower on anxiety which is as expected (Asher & Parker, 1989; Newcomb & Bagwell, 1995; Sullivan, 1953 in Hartup, 1996). This means that positive friendship quality might have a protective function in general since it was related to less anxiety. More surprising is the negative effect of co-rumination on anxiety. Though associated with both costs and benefits, in general, co-rumination is related to more internalizing symptoms (Rose, 2002; Rose, 2007). Because positive friendship quality and co-rumination were strongly correlated, it is unclear whether or not each contributes independently to anxiety. That is, high levels of co-rumination may reflect high friendship quality and therefore be related to lower anxiety. Another possible explanation might be that co-rumination was self-reported and anxiety peer-reported. Anxiety might be felt more than it was shown. It is also possible that the direction of effect is reversed and that when adolescents are less anxious they co-ruminate less.

Our research does have certain limitations. Because we analyzed concurrent data, we can not say anything about direction of effect. It is possible that emotional problems, like anger, over time make adolescents more likely to be victimized (Boulton et al., 1991; Hodges & Perry, 1999). Hodges and Perry (1999) state that there might be a vicious circle in which emotional problems make adolescents more susceptible to victimization, which then heightens the emotional problems, creating a stable pattern of victimization. More longitudinal research will be needed to look at whether anger, sadness and anxiety are antecedents or consequences. We also found a very high correlation between positive friendship quality and co-rumination so we couldn't differentiate between the effects of both constructs. To solve this future researcher should develop a new measure of co-rumination. Daily diaries combined with observations may better reflect whether the adolescents co-ruminate. In addition, it would be informative to know which exact aspect of positive friendship quality has a protective effect. It is possible that being validated has a different effect than intimate exchange. Moreover, the degree to which friendship quality provides a protective function might be further dependent on age and gender. Although we found a few age and gender differences, we did not study moderating role of gender and age.

Another limitation is that we used peer-reported single-item constructs for our dependent variables, for which reliability could not be calculated. However, when using peer nominations, information is actually obtained from multiple informants (peers), which makes it a more valid measure. But to get a more representative picture, future research should be complemented with self-reports and, if possible, with observations.

Future research should also focus the number of interactions friends have and whether this influences their friendship quality or their maladjustment outcomes when victimized. It would give insight in the possibility that friendships protect victimized adolescents against chronic victimization (Hodges et al., 1999) but only when they meet their need for belongings (Baumeister & Leary, 1995). Future research would best use different methods of collecting data. Friendship frequency might be better measured by observation combined with self-reported measures and peer-reported measures. Finally, future research might look at a potential three-way interaction between victimization, conflict, and positive friendship quality. Conflict in the context of high positive friendship quality might be very different than conflict in the context of low positive friendship quality and may have a different effect on maladjustment outcomes.

Practically our findings might have some implications as well. Since victimization can have lasting effects into young adulthood (Newman et al., 2005), it is important to use effective interventions. Our findings are relevant for all interventions against bullying or victimization that are based on the support of peers. Our sample consisted of middle school students but we expect that when this was tested with a sample of bullied adolescents the effects that we found would be enhanced. So our results are perhaps important for interventions against bullying as well. Our findings are relevant for all interventions against bullying or victimization that are based on the support of peers, since our results give us reason to believe that friendship quality is not automatically protective. Also conflict should not be taken as a sign of disruptions in friendships but rather as a normal part of friendship. Interventions can assess or perhaps improve their set-up based on this information.

Our research has certain strengths. First of all we had a large representative sample. Therefore we can test whether our findings generalize to other countries. Our research is useful in real life practices and might be used to improve intervention programs. The measures we used had high reliabilities and were proven valid in

former studies. In addition, we only examined reciprocal friendships. This means that we only looked at friendship quality of adolescents who actually had a friend. Our research adds to current knowledge because there have not been many studies on moderating role of friendship quality in the link between victimization and adjustment.

In summary, although we found support for our hypothesis that friendship quality moderates associations between victimization and maladjustment, the pattern of results was unexpected. It seems that conflict should not be automatically taken as an index of something going wrong in friendships but rather a normal part of friendships. This knowledge provides further insight into the role friendships play in the adjustment of victimized adolescents. Friendship does seem to play a role in the well-being of victimized adolescents. However according to our research, friendships of higher quality or low in conflict might not always provide a protective function but can actually make things worse. This seems to depend on the outcome variable looked at. Further research may confirm this, which may help improve or create effective intervention programs.

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